



### **Key Indicators of Perinatal Health for Washington Residents Spring 2004**

The health of pregnant women and their newborn infants is a priority for the Washington State Department of Health (DOH) and the Department of Social and Health Services (DSHS). This document provides key information to identify perinatal health issues and help guide decision-making by the Washington State Department of Health and DSHS Medical Assistance Administration. Annual updates for this report will provide data for ongoing needs assessment and program evaluation.

The *Key Indicators of Perinatal Health* was a collaborative project conducted by the Statewide Perinatal Advisory Committee, the First Steps Database staff from the DSHS Division of Research, Data and Analysis, and Maternal and Infant Health and Maternal Child Health Assessment staff from the Department of Health. The indicators were derived from Washington State birth, fetal death and death certificate data, the First Steps Database, and the Pregnancy Risk Assessment Monitoring System (PRAMS).

#### **Highlights of the Report:**

The total number of live births remained fairly stable from 1990 to 2002 at approximately 80,000 births per year.

Medicaid-funded deliveries represented 43.4% of births in 2002.

Both primary and repeat cesarean section births increased from 1990 to 2002.

Total infant mortality, race-specific infant mortality and Medicaid-specific infant mortality have declined substantially since 1990.

The singleton very low birth weight (VLBW) rate remained stable from 1990 to 2002.

Smoking during pregnancy, as reported on the birth certificate, has declined since 1992.

In 2001, initiation of breastfeeding was high in Washington State at approximately 90%.

#### **Areas of concern include:**

In 2002, African American and Native American infant mortality rates continued to exceed infant mortality rates of other race and ethnic groups.

In 2002, the highest singleton low birth weight (LBW) rate was for African Americans.

The singleton VLBW rate among African Americans remained well over twice the rate of Whites between 1990 and 2001.

In 2002, approximately 83% of VLBW infants were born in hospitals with neonatal intensive care (Level III) units, while the remaining 17% were born in hospitals without neonatal intensive care services.

In 2002, women receiving Medicaid had lower rates of first trimester prenatal care and higher rates of late and no prenatal care than women who did not receive Medicaid.

In 2002, smoking rates during pregnancy were significantly higher for women receiving Medicaid than for women who did not receive Medicaid.

In 2001, the unintended pregnancy rate was approximately 54%.

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All rates and percentages are calculated after excluding records with unknown data. In some instances where the amount of unknown data is substantial the amount of unknown data is shown below the calculated rates and percentages.

Livebirths and Deliveries	1990		1999		2000		2001		2002		HP 2010	2002 WA Rank
Total Livebirths (# of liveborn infants)	79,468		79,577		81,004		79,542		79,003			
Livebirths By Mother's Race/Ethnicity												
White	69,462	89.2%	65,069	85.8%	65,988	84.7%	65,308	84.8%	64,159	84.1%		
African American	2,856	3.7%	3,138	4.1%	3,335	4.3%	3,184	4.1%	3,245	4.2%		
Native American	1,689	2.2%	1,790	2.4%	1,914	2.5%	1,810	2.4%	1,853	2.4%		
Asian	3,833	4.9%	5,767	7.6%	6,598	8.5%	6,639	8.6%	6,899	9.0%		
Other	4	0.0%	50	0.1%	32	0.0%	71	0.1%	96	0.1%		
Unknown	1,624		3,763		3,137		2,530		2,751			
Hispanic Origin <sup>1</sup>	5,726	7.2%	10,318	13.0%	11,359	14.0%	12,115	15.2%	12,393	15.7%		
Total Deliveries (# of women who delivered livebirths or fetal deaths) <sup>2</sup>	78,567		78,353		79,809		78,314		77,799			
Medicaid-Funded Deliveries <sup>3</sup>	25,740	32.8%	32,830	41.9%	33,913	42.5%	34,124	43.6%	33,744	43.4%		
Multiple Gestation Deliveries <sup>4</sup>	959	1.2%	1,120	1.4%	1,137	1.4%	1,111	1.4%	1,157	1.5%		

- The total number of live births has stayed fairly stable from 1990 to 2002 at approximately 80,000 births per year.
- Between 1990 and 2002, births to Asian women increased over 80% and births to Hispanic women increased over 115%.
- In 2002, approximately 84% of births were to white women, 4% to African American women, 2% to Native American women, 9% to Asian women and 16% to Hispanic women.
- Since the expansion of Medicaid through First Steps in 1989, Medicaid-funded deliveries have increased over 30% and in 2002 represented 43.4% of deliveries.
- In 2002, multiple gestations represented 1.5% of deliveries.

1. Persons of Hispanic origin may be of any race.  
2. "Total deliveries" includes women who delivered a livebirth or fetal death (stillbirth) greater than 20 weeks. Each woman is counted only once regardless of the plurality of her pregnancy. These data are from the First Steps Database which excludes approximately 500 births per year that are unavailable for matching to Medical Assistance data.  
3. "Medicaid-funded deliveries" includes women who delivered a livebirth or fetal death (stillbirth) greater than 20 weeks whose deliveries were covered by Medicaid. Each woman is counted only once regardless of the plurality of her pregnancy. A delivery is considered covered by Medicaid if the mother received Medicaid-paid prenatal or delivery services or if she was enrolled in Medicaid managed care for at least 3 of the 6 months prior to delivery. These data are from the First Steps Database which excludes approximately 500 births per year that are unavailable for matching to Medical Assistance data.  
4. "Multiple gestation deliveries" includes women who delivered livebirths or fetal deaths (stillbirths) greater than 20 weeks that were twins, triplets or quadruplets. These data are from the First Steps Database which excludes approximately 500 births per year that are unavailable for matching to Medical Assistance data.

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Birth Rate (Live births per 1,000 women) <sup>5</sup>	1990	1999	2000	2001	2002	HP 2010	2002 WA Rank <sup>6</sup>
15-44 years	69.0	61.9	62.7	61.2	60.8		12
15-19 years	53.4	40.7	39.1	35.6	33.0		13
15-17 years	29.8	21.6	20.4	17.7	16.8		12
18-19 years	85.1	69.5	67.6	62.8	57.7		13

Pregnancy Rate [(Live births + fetal deaths $\geq$ 20 weeks + abortions) per 1,000 women] <sup>5</sup>	1990	1999	2000	2001	2002	HP 2010	2002 WA Rank
15-44 years	96.0	82.5	83.2	81.6	80.7		
15-19 years	95.2	66.5	64.3	59.6	55.9		
15-17 years	57.9	38.0	36.3	32.9	30.9	43.0	
18-19 years	145.0	109.6	107.0	100.3	93.8		

- Both birth rates and pregnancy rates have decreased significantly from 1990 to 2002 for women of childbearing age (15-44 years).
- Among teens (15-17 years), the pregnancy rate decreased from 57.9 pregnancies per 1,000 teen women in 1990 to 30.9 in 2002. During the same period, the birth rate decreased from 29.8 births per 1,000 teen women to 16.8 per 1,000.

5. Age-specific rates equal the number of births or pregnancies occurring to women in a specific age group per 1,000 female population in that age group.

6. The 2002 WA State Rank is the ranking of Washington among the 50 states based on the National Center for Health Statistics data, with 1 being the best and 50 the worst. Note that the rates reported in this document are based on the Washington State Center for Health Statistics reports and do not always match the federally reported Washington State rates. The birth rates for women 15-17 years ranged from 8.1 to 38.2 livebirths per 1000 women and for women 18-19 years from 29.0 to 104.3 per 1000 women.

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Livebirth Delivery Services (All Births Occurring in WA)	1990		1999		2000		2001		2002		HP 2010	2002 WA Rank
Births Occurring in Washington State (includes residents and non-residents)	78,045		79,095		80,463		79,101		78,590			
Birth Facility												
Hospital (includes Military Hospitals)	76,218	97.7%	77,528	98.0%	78,666	97.8%	77,389	97.8%	76,900	97.8%		
Birth Center	162	0.2%	407	0.5%	580	0.7%	561	0.7%	525	0.7%		
Home	1,362	1.7%	1088	1.4%	1122	1.4%	1052	1.3%	1063	1.4%		
Other (includes Born on Arrival, Other)	293	0.4%	72	0.1%	94	0.1%	98	0.1%	102	0.1%		
Unknown	10		0		1		1		0			
Birth Attendant <sup>7</sup>												
MD/DO	73,155	94.1%	69,772	88.9%	70,561	88.1%	69,164	87.9%	68,864	88.0%		
Certified Midwife <sup>8</sup>	2,989	3.8%	6,354	8.1%	6,874	8.6%	6,721	8.5%	6,757	8.6%		
Licensed Midwife	1,035	1.3%	1,481	1.9%	1,684	2.1%	1,763	2.2%	1,743	2.2%		
Nurse	195	0.3%	424	0.5%	411	0.5%	473	0.6%	400	0.5%		
Other (includes Other Midwife, Father, Hospital Administrator, and Other)	376	0.5%	452	0.6%	602	0.8%	555	0.7%	487	0.6%		
Unknown	295		612		331		425		339			

- In 2002, nearly 98% of births in Washington State occurred in hospitals. This proportion has remained stable since 1990.
- MDs or DOs were listed as the birth attendant in approximately 88% of births in 2002. This is less than in 1990. Concurrently, the percent of births delivered by certified (nurse) midwives (8.6% in 2002) and licensed midwives (2.2% in 2002) has increased.

7. In 1999 - 2002, a number of deliveries were reported with "Hospital Administrator" listed as the birth attendant. In reviewing the data it appears this may be due to some reporting issues being addressed by the Center for Health Statistics. In the majority of these reports, the hospital administrator certified the birth and the birth attendant was unknown. In these cases, the data have been recoded as unknown attendant. However, when the hospital administrator was listed as the birth attendant, the record was not recoded.

8. Based on a review of the data, the category "Certified Midwife" refers to Certified Nurse Midwives.

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Livebirth Delivery Services (cont'd)	1990		1999		2000		2001		2002		HP 2010	2002 WA Rank <sup>9</sup>
Method of Delivery												
Total Vaginal Births	56,304	80.3%	63,879	80.9%	63,583	79.0%	61,100	77.3%	59,447	75.6%		
Vaginal Birth After C-Section (VBAC)	1,852	2.6%	1,893	2.4%	1,604	2.0%	1,417	1.8%	1,135	1.4%		
Primary C-Section	8,651	12.3%	9,646	12.2%	10,521	13.1%	10,991	13.9%	11,652	14.8%		
Repeat C-Section	5,198	7.4%	5,408	6.9%	6,349	7.9%	7,001	8.9%	7,484	9.5%		
Unknown	7,892		162		10		9		7			
Total C-Sections per 100 livebirths	19.7		19.1		21.0		22.8		24.4			17
Primary C-Section per 100 livebirths w/o history of c-section	13.7		13.5		14.5		15.6		16.7		15.5	
VBAC per 100 livebirths w/ history of c-section	26.3		25.9		20.2		16.8		13.2			28

- In 2002, 75.6% of livebirths were delivered vaginally, down from 80.3% in 1990.
- Both primary and repeat cesarean section deliveries increased from 1990 to 2002. The increase in c-section deliveries is also evident in the recent drop in the vaginal birth after c-section (VBAC) rate which decreased from approximately 30 VBACs per 100 livebirths with a history of c-section in the mid 1990s to 13.2 in 2002.

9. The 2002 WA State Rank is the ranking of Washington among the 50 states based on the National Center for Health Statistics data, with 1 being the best and 50 the worst. Note that the rates reported in this document are based on the Washington State Center for Health Statistics reports and do not always match the federally reported Washington State rates. The cesarian sections rate ranged from 19.1 to 31.1%, and the VBAC rate for women with a history of c-section ranged from 6.4 to 25.6%.

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Mortality <sup>10</sup>	1990	1999	2000	2001	2002	HP 2010	2002 WA Rank <sup>11</sup>
Fetal deaths per 1,000 livebirths <sup>12</sup>	5.8	5.9	5.4	5.3	5.5	4.1	
Perinatal deaths per 1,000 livebirths <sup>13</sup>	9.2	8.4	7.7	8.2	8.3	4.5 <sup>14</sup>	
Infant deaths per 1,000 livebirths (period) <sup>15</sup>	7.8	5.0	5.2	5.8	5.7	4.5	4 (2001)
Neonatal deaths per 1,000 livebirths (period) <sup>16</sup>	4.2	3.2	3.1	3.7	3.6	2.9	
Post Neonatal deaths per 1,000 livebirths (period) <sup>17</sup>	3.6	1.8	2.1	2.1	2.1	1.2	
SIDS deaths per 1,000 livebirths (period) <sup>18</sup>	2.4	0.9	0.9	0.8	0.9		

■ Total infant mortality, race-specific infant mortality and Medicaid-specific infant mortality have all declined substantially since 1990. Rates in 2001-2002 are higher than in 1999-2000, and may indicate an increasing trend or fluctuation due to small numbers.

10. In many of the rates presented, single year data are subject to fluctuation due to small numbers.  
11. The 2002 WA State Rank is the ranking of Washington among the 50 states based on the National Center for Health Statistics data, with 1 being the best and 50 the worst. For 2001 infant mortality rates range from 4.9 per 1000 livebirths to 10.4 per 1000 livebirths.  
12. Fetal death reporting in Washington is required when the fetus is 20 weeks gestation or more.  
13. Perinatal deaths refer to fetal deaths of 20 weeks gestation or more as well as infant deaths from birth through 6 days of age.  
14. The Healthy People 2010 target is for perinatal mortality defined as 28 weeks or more gestation plus deaths of infants less than 7 days old.  
15. Infant deaths refer to deaths to infants from birth through 364 days of age. These are crude infant mortality rates which use infant deaths in a given year as the numerator and infant births in the same year as the denominator. These are also known as period infant mortality rates.  
16. Neonatal deaths refer to deaths to infants birth through 27 days of age.  
17. Post neonatal deaths refer to deaths to infants from 28 through 364 days of age.  
18. Cause of death was coded with ICD-9 in 1990-1998 and with ICD 10 in 1999-2002. Rates during 1990 and 1998 have been multiplied by a comparability ratio. See <http://www.doh.wa.gov/ehsphl/chs/chs-data/infdeath/download/InfantF1.xls> for additional information.

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Mortality (cont'd)	1990	1999	2000	2001	2002	HP 2010	2002 WA Rank
Race/ethnic-specific Infant deaths per 1,000 livebirths (period) <sup>19</sup>							
White	7.0	4.4	5.0	5.5	5.2	4.5	
African American	17.2	13.7	7.2	11.6	8.9	4.5	
Native American	23.7	7.3	9.4	10.5	11.9	4.5	
Asian	4.4	3.6	5.2	3.8	5.1	4.5	
Hispanic Origin <sup>20</sup>	8.2	5.1	4.8	4.7	5.5	4.5	
Infant deaths per 1,000 livebirths (cohort) <sup>21</sup>							
Total	7.4	5.0	5.5	5.6	n/a		
Medicaid	11.1	6.5	6.9	6.8	n/a		
Non-Medicaid	5.6	3.8	4.4	4.7	n/a		
Singleton	6.9	4.4	5.1	5.1	n/a		
Twins	23.4	21.2	18.0	21.3	n/a		
Triplets	122.8	90.0	21.1	57.1	n/a		

- In 2002, African American (8.9 per 1,000) and Native American (11.9 per 1,000) mortality rates continued to exceed infant mortality rates of other race/ethnic groups.
- The mortality of infants whose mothers received Medicaid-funded maternity care (6.8 per 1,000) also continued to exceed the mortality of infants whose mothers did not receive Medicaid-funded maternity care (4.7 per 1,000).
- In 2001, the mortality of twins (21.3 per 1,000) and triplets (57.1 per 1,000) greatly exceeded the mortality of singleton infants (5.1 per 1,000).

19. Race and ethnicity are determined from the birth certificate after matching infant death certificates to the child's birth certificate. There were 29, 35, 16, 20, and 34 deaths in 1990, 1999-2002 that were of unknown race/ethnicity. These are period infant mortality rates based on the matched infant death file.

20. Persons of Hispanic origin may be of any race.

21. These are cohort infant mortality rates. Cohort mortality rates look at the experience of a birth cohort. The denominator includes all births in a specified year (cohort) and the deaths before 365 days of age among those infants in the numerator. The deaths may occur in the cohort year or the subsequent year. These data come from the First Steps Database and exclude approximately 500 births each year that are unavailable for matching to Medical Assistance data.

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Birth Weight	1990	1999	2000	2001	2002	HP 2010	2002 WA Rank <sup>22</sup>
Low Birth Weight Births <sup>23</sup>							
Low birth weight (LBW) births per 100 livebirths	5.3	5.9	5.6	5.8	5.8	5.0%	3
Singleton LBW births per 100 singleton livebirths							
Total	4.3	4.5	4.3	4.5	4.4		
White	4.0	4.1	4.0	4.2	4.1		
African American	10.3	8.6	8.9	8.1	8.5		
Native American	5.8	5.5	5.5	6.5	5.4		
Asian	5.3	6.2	5.4	5.3	5.6		
Hispanic Origin <sup>24</sup>							
	4.5	4.4	4.5	4.3	4.6		
Medicaid <sup>25</sup>							
	6.0	5.3	5.2	5.2	5.2		
Non-Medicaid	3.5	3.8	3.6	3.9	3.7		

- Total low birth weight (LBW) increased from 5.3% in 1990 to 5.8% in 2002. The increase in total low birth weight is attributable to the influence of multiple births. This is shown in the stable rate of singleton low birth weight (about 4.5%) from 1990 to 2002.
- In 2002, the highest singleton LBW rates were for African Americans (8.5%).
- The Medicaid singleton LBW rate in 2002 (5.2%) continued to exceed the Non-Medicaid singleton LBW rate (3.7%) despite considerable improvement in the Medicaid rate since 1990.

22. The 2002 WA State Rank is the ranking of Washington among the 50 states based on the National Center for Health Statistics data, with 1 being the best and 50 the worst. Note that the rates reported in this document are based on the Washington State Center for Health Statistics reports and do not always match the federally reported Washington State rates. Total LBW rates ranged from 5.8 per 100 livebirths to 11.2 per 100 livebirths.

23. Low birth weight is defined as less than 2,500 grams (5 lbs. 8 oz.).

24. Persons of Hispanic origin may be of any race.

25. These data come from the First Steps Database and exclude approximately 500 births each year that are unavailable for matching to Medical Assistance data.



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Birth Weight (cont'd)	1990	1999	2000	2001	2002	HP 2010	2002 WA Rank <sup>26</sup>
Very Low Birth Weight Births <sup>27</sup>							
Very low birth weight (VLBW) births per 100 livebirths	0.8	1.0	1.0	1.0	1.0	0.9%	5
Singleton VLBW births per 100 singleton livebirths							
Total	0.7	0.8	0.8	0.8	0.8		
White	0.6	0.7	0.7	0.7	0.7		
African American	2.1	1.7	2.0	1.7	1.9		
Native American	1.4	0.9	1.1	1.4	1.4		
Asian	0.4	1.0	0.8	0.9	0.8		
Hispanic Origin <sup>28</sup>	0.9	0.9	0.8	0.8	0.9		
Medicaid <sup>29</sup>	1.0	1.0	0.9	0.9	0.9		
Non-Medicaid	0.5	0.6	0.6	0.7	0.7		
VLBW births at Tertiary Care Facilities <sup>30</sup>	n/a	n/a	73.1%	75.4%	82.6%	90%	

- The singleton very low birth weight rate has remained stable from 1990 to 2002 at 0.8 per 100 live births.
- The singleton VLBW rate among African Americans has remained well over twice the rate of Whites between 1990 and 2002.
- One measure used to evaluate the effectiveness of perinatal regionalization is the percent of VLBW births occurring at tertiary care facilities. In Washington State, approximately 83% of VLBW infants were born in tertiary care facilities in 2002.

26. The 2002 WA State Rank is the ranking of Washington among the 50 states based on the National Center for Health Statistics data, with 1 being the best and 50 the worst. Note that the rates reported in this document are based on the Washington State Center for Health Statistics reports and do not always match the federally reported Washington State rates. VLBW rates ranged from 0.9 per 100 livebirths to 2.2 per 100 livebirths.

27. Very low birth weight is defined as less than 1,500 grams (3 lbs. 4 oz.).

28. Persons of Hispanic origin may be of any race.

29. These data come from the First Steps Database and exclude approximately 500 births each year that are unavailable for matching to Medical Assistance data.

30. These data are limited to resident births that occurred in Washington State. Tertiary Care Facilities are as recommended by the Perinatal Advisory Committee Subgroup on Level of Care.

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Preterm Births <sup>31</sup>	1990 <sup>32</sup>	1999	2000	2001	2002	HP 2010	2002 WA Rank
Preterm births per 100 livebirths	n/a	9.2	9.7	10.1	9.8	7.6%	
Very preterm (<32 weeks)	n/a	1.3	1.3	1.5	1.4		
Moderately preterm (32-36 weeks)	n/a	7.9	8.4	8.7	8.4		
Singleton preterm births per 100 livebirths	n/a	8.1	8.6	8.9	8.6		
Very preterm (<32 weeks)	n/a	1.0	1.0	1.1	1.1		
Moderately preterm (32-36 weeks)	n/a	7.1	7.6	7.8	7.5		

- The rate of preterm birth is more than double the LBW rate. This means that many preterm infants in Washington State weigh more than 2,500 grams.
- The rate of preterm birth increased over 15% from 8.5 per 100 livebirths in 1993 to 9.8 per 100 livebirths in 2002. This increase is largely due to the increase in moderately preterm births (32-36 weeks).

31. Gestational age is calculated following National Center for Health Statistics methodology. This is documented at [www.cdc.gov/nchs/data/dvs/instr12.pdf](http://www.cdc.gov/nchs/data/dvs/instr12.pdf).  
32. Because of changes in the National Center for Health Statistics guidelines for gestational age calculations effective 1993, comparable 1990 data are not available. In 1993, the preterm birth rates were 8.5 (total), 1.2 (<32 weeks), and 7.3 (32-36 weeks). For singletons, the preterm birth rates were 7.6 (total), 1.0 (<32 weeks), and 6.6 (32-36 weeks).

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Initiation of Prenatal Care <sup>33</sup>	1990	1999	2000	2001	2002	HP 2010	2002 WA Rank <sup>34</sup>
First Trimester Prenatal Care per 100 pregnant women <sup>35</sup>							
Total	77.6	83.0	82.7	83.3	83.5	90%	31
Medicaid	59.4	71.8	72.1	73.6	74.4		
Non-Medicaid	86.3	90.9	90.5	90.5	90.2		
Late/No Prenatal Care per 100 pregnant women <sup>36</sup>							
Total	4.5	3.0	3.2	2.9	3.0		21
Medicaid	9.4	5.3	5.6	4.9	5.0		
Non-Medicaid	2.1	1.4	1.4	1.5	1.5		
Unknown Prenatal Care (percent of all pregnant women)							
Total	4.7%	9.5%	7.8%	8.2%	8.8%		50
Medicaid	6.2%	9.8%	8.4%	10.1%	10.6%		
Non-Medicaid	3.9%	9.3%	7.4%	6.8%	7.5%		

- Prenatal care initiation in the first trimester was 83.5% in 2002.
- Prenatal care initiation for women receiving Medicaid increased significantly since 1990 (First Steps started in August 1989).
- Rates of late or no prenatal care have declined from 4.5% in 1990 to 3.0% in 2002 and have been cut almost in half for Medicaid women during that time period.
- The high number (and percent) of birth certificates with missing data for the month prenatal care began continues to be a reporting issue. In 2002, prenatal care could not be determined for 8.8% of births.

33. These data are from the First Steps Database and reflect prenatal care provided to women who delivered either a livebirth or fetal death. These data exclude approximately 500 births every year that are unavailable for matching to Medical Assistance data. First trimester prenatal care and late/no prenatal care rates are calculated after excluding records missing month prenatal care began. "Unknown prenatal care" represents the records missing month prenatal care began which were excluded before calculating prenatal care rates.

34. The 2002 WA State Rank is the ranking of Washington among the 50 states based on the National Center for Health Statistics data, with 1 being the best and 50 the worst. Note that the rates reported in this document are based on the First Steps Database reports and do not always match the federally reported Washington State rates. First trimester prenatal care initiation ranged from 91.5% of births to 69% of births. Late or no prenatal care ranged from 1.4% to 2.9%, and the unknown prenatal care percent ranged from 0.1% to 8.8%.

35. "Pregnant women" refers to women who delivered a live birth or fetal death greater than 20 weeks gestation.

36. "Late/No prenatal care" refers to women who received prenatal care during their third trimester or received no prenatal care.

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Smoking During Pregnancy <sup>37</sup>	1990 <sup>38</sup>	1999	2000	2001	2002	HP 2010	2002 WA Rank
Rate of Smoking in Pregnancy (per 100 pregnant women) <sup>39</sup>	n/a	14.2	13.4	12.6	11.9	1%	
Medicaid	n/a	23.5	22.7	21.7	20.8		
Non-Medicaid	n/a	7.5	6.6	5.7	5.3		
Unknown (percent of all pregnant women)	n/a	6.5%	4.5%	2.5%	2.7%		

Medicaid Expenditures for Maternal & Infant Services <sup>40, 41</sup>	1990	1999	2000	2001	2002	HP 2010	2002 WA Rank
Average costs per client for maternal services (prenatal through end of 2nd month post partum)	\$3,506	\$5,907	\$6,497	\$6,832	\$7,033		
Average costs per client for infant services (first year of life)	\$2,332	\$3,980	\$4,377	\$4,684	----		
Combined average costs for maternal/infant services	\$5,838	\$9,886	\$10,875	\$11,516	\$12,094		

- Smoking during pregnancy, as reported on the birth certificate, has declined from 19.9% in 1992 to 11.9% in 2002.
- Smoking rates are significantly higher for women receiving Medicaid but have also declined from 31.4% in 1992 to 20.8% in 2002.

37. These data are from the First Steps Database and reflect women who delivered a livebirth or fetal death greater than 20 weeks gestation who reported smoking during pregnancy on the birth or fetal death certificate. These data exclude approximately 500 births every year that are unavailable for matching to Medical Assistance data.

38. "Pregnant women" refers to women who delivered a live birth or fetal death greater than 20 weeks gestation. Rate of smoking in pregnancy is calculated after excluding records missing information on smoking during pregnancy. "Unknown" represents the records that were excluded before calculating rates of smoking during pregnancy.

39. Because of changes in the collection of smoking data on birth certificates from 1989 to 1991, 1990 data are not a valid comparison. 1992 data are a more appropriate comparison. In 1992, the rate of smoking in pregnancy was 19.9% of women. Among Medicaid recipients, the rate of smoking was 31.4%, and among women who did not receive Medicaid, the rate of smoking was 12.5%. For 3.1% of the women, smoking status was unknown.

40. Dollars are the actual amounts paid for a given year and have not been adjusted for inflation. These data were reported by the First Steps Database in March 2004. Data are subject to change as claims are paid.

41. Maternity Support Services and Maternity Case Management costs are included in the prenatal and post partum costs.

Data for the perinatal indicators on the previous pages came from Washington State birth, fetal death, A500 and death certificate data as well as the First Steps Database. The following perinatal indicators were collected from the Pregnancy Risk Assessment Monitoring System (PRAMS), an ongoing population based surveillance system sponsored by the Centers for Disease Control and Prevention that surveys new mothers who are representative of all registered births to Washington State residents. The Washington State Department of Health has been collecting PRAMS data since 1993. For more information on PRAMS data contact MCH Assessment at 360-236-3533 or visit the website at <http://www.doh.wa.gov/cfh/prams>.

Unintended Pregnancy	PRAMS 2000			PRAMS 2001		
Survey Question 10. Thinking back to just before you got pregnant, how did you feel about becoming pregnant?	Total Percent (95% CI)	Medicaid Percent (95% CI)	Non-Medicaid Percent (95% CI)	Total Percent (95% CI)	Medicaid Percent (95% CI)	Non-Medicaid Percent (95% CI)
I wanted to be pregnant sooner	21 (18, 24)	13 (10, 18)	26 (22, 30)	17 (15, 20)	9 (7, 12)	23 (19, 27)
I wanted to be pregnant later	31 (28, 34)	47 (42, 52)	21 (17, 25)	30 (27, 33)	43 (38, 48)	21 (17, 25)
I wanted to be pregnant then	41 (38, 45)	31 (26, 36)	48 (43, 53)	43 (40, 47)	34 (29, 39)	50 (45, 55)
I didn't want to be pregnant then or at any time in the future	7 (5, 9)	9 (6, 12)	5 (4, 8)	9 (7, 11)	13 (10, 17)	6 (4, 9)
Estimated births from unintended pregnancies <sup>41</sup>	38 (35, 41)	56 (51, 62)	26 (22, 30)	39 (36, 43)	56 (51, 61)	27 (23, 31)
Estimated pregnancies that were unintended <sup>42</sup>	53			54		

- Approximately 39% of Washington State births resulted from unplanned pregnancies in 2001. This rate is significantly higher for women receiving Medicaid (56%) than for women not receiving Medicaid (27%).
- The unintended pregnancy rate was approximately 54% in 2001. (This rate includes births and abortions.)

41. Responses to “I wanted to be pregnant later” are referred to as “mistimed” and responses to “I didn’t want to be pregnant then or at any time in the future” are referred to as “unwanted.” Together these two categories are what is considered “unintended.”

42. Estimated pregnancies that are unintended are calculated by taking the estimated births that were unintended from PRAMS and multiplying this by the number of livebirths. The number of abortions is added to this number, and then the sum is divided by the number of livebirths and abortions. This estimate assumes that all reported abortions are due to unintended pregnancies, though a small percentage might be medically indicated.

Provider Screening	PRAMS 2000			PRAMS 2001		
Survey Question 21. During any of your prenatal care visits, did a doctor, nurse, or other health care worker ask you questions about any of the things listed below?	Total	Medicaid	Non-Medicaid	Total	Medicaid	Non-Medicaid
	Percent (95% CI)	Percent (95% CI)	Percent (95% CI)	Percent (95% CI)	Percent (95% CI)	Percent (95% CI)
a. If you were smoking cigarettes	91 (89, 93)	91 (88, 94)	91 (88, 94)	91 (89, 93)	92 (89, 95)	90 (86, 92)
b. How much alcohol you were drinking	83 (78, 85)	80 (75, 84)	84 (81, 88)	82 (79, 85)	81 (76, 85)	83 (79, 86)
c. If someone was hurting you emotionally or physically	51 (47, 54)	58 (52, 63)	47 (42, 51)	60 (56, 63)	72 (67, 76)	51 (46, 56)
d. If you were using illegal drugs (marijuana or hash, cocaine, crack, etc.)	68 (65, 71)	73 (68, 71)	64 (60, 69)	74 (71, 77)	83 (78, 86)	68 (63, 72)
e. If you wanted to be tested for HIV (the virus that causes AIDS)	80 (77, 83)	82 (78, 86)	79 (75, 82)	85 (83, 88)	87 (83, 90)	84 (80, 87)
f. If you planned to use birth control after your baby was born	90 (88, 92)	96 (93, 97)	87 (83, 90)	89 (86, 91)	96 (93, 97)	84 (80, 87)
Survey Question 66. At any time during your pregnancy, did a doctor, nurse or other health care worker ask you about the following things?						
a. "Baby blues" or post partum depression	74 (71, 77)	80 (75, 84)	70 (65, 74)	75 (72, 78)	79 (74, 83)	73 (68, 77)
b. Tests that could be done during your pregnancy to see if your baby had a birth defect or genetic disease.	90 (88, 92)	85 (81, 88)	94 (91, 96)	92 (90, 94)	89 (85, 91)	94 (91, 96)

- Provider screening rates were reported at approximately 90% or higher for smoking, planning for postpartum birth control and testing for birth defects in 2001.
- The lowest provider screening rates were reported for domestic violence (60%) and use of illegal drugs (74%) in 2001, despite significant increases since 2000.

Breastfeeding	PRAMS 2000			PRAMS 2001		
Survey Question 46. Did you ever breastfeed or pump breast milk to feed to your new baby after delivery?	Total	Medicaid	Non-Medicaid	Total	Medicaid	Non-Medicaid
	Percent	Percent	Percent	Percent	Percent	Percent
	(95% CI)	(95% CI)	(95% CI)	(95% CI)	(95% CI)	(95% CI)
Percent of women who responded they ever breastfed	88 (86, 91)	84 (80, 88)	91 (88, 93)	90 (88, 92)	84 (80, 88)	95 (92, 97)
Percent of women who reported breastfeeding at two months post partum	71 (67, 74)	63 (58, 68)	76 (72, 80)	71 (67, 74)	61 (55, 66)	78 (74, 82)

- In 2001, initiation of breastfeeding was high in Washington State at approximately 90%. However, rates dropped to approximately 71% at 2 months postpartum.
- This decline is more acute among women receiving Medicaid. Approximately 84% of women receiving Medicaid reported initiating breastfeeding, but this rate dropped to approximately 61% at 2 months postpartum.



Folic Acid Use Prior to Pregnancy		PRAMS 2000			PRAMS 2001		
Survey Question 3. In the month <i>before</i> you got pregnant with your new baby, how many times a week did you take a multivitamin (a pill that contains many different vitamins and minerals?)		Total	Medicaid	Non-Medicaid	Total	Medicaid	Non-Medicaid
		Percent	Percent	Percent	Percent	Percent	Percent
		(95% CI)	(95% CI)	(95% CI)	(95% CI)	(95% CI)	(95% CI)
	I didn't take a multivitamin at all	54	69	44	55	73	42
		(50, 57)	(64, 74)	(39, 49)	(51, 58)	(68, 77)	(37, 47)
	1 to 3 times a week	11	9	12	10	11	9
		(9, 13)	(7, 13)	(9, 15)	(8, 12)	(8, 15)	(7, 13)
	4 to 6 times a week	8	7	8	6	3	8
		(6, 10)	(4, 10)	(6, 11)	(4, 8)	(1, 5)	(6, 12)
	Every day of the week	27	15	36	29	13	40
		(24, 31)	(11, 19)	(31, 40)	(26, 32)	(10, 17)	(36, 45)

- In 2001, only about 29% of women reported taking a multivitamin every day of the week, and about 55% of women reported not taking any multivitamin at all in the month prior to becoming pregnant.
- Women receiving Medicaid were less likely to report daily use, and more likely than women not receiving Medicaid to report not taking a multivitamin at all in the month prior to becoming pregnant.

Sleep Position		PRAMS 2000			PRAMS 2001		
Survey Question 51. How do you <i>most often</i> lay your baby down to sleep now?		Total Percent (95% CI)	Medicaid Percent (95% CI)	Non-Medicaid Percent (95% CI)	Total Percent (95% CI)	Medicaid Percent (95% CI)	Non-Medicaid Percent (95% CI)
On his or her side		16 (14, 19)	22 (18, 26)	13 (10, 16)	14 (12, 17)	17 (14, 21)	12 (9, 16)
On his or her back		71 (68, 74)	62 (57, 67)	76 (72, 80)	71 (68, 74)	65 (60,70)	75 (71, 79)
On his or her stomach		7 (5, 8)	6 (4, 9)	7 (5, 10)	9 (7, 11)	8 (6, 12)	9 (6, 12)
On his or her side and back		5 (3, 6)	8 (6, 11)	3 (2, 5)	4 (3, 5)	7 (5, 10)	2 (1, 4)
Other <sup>43</sup>		2 (1, 3)	3 (2, 5)	1 (1, 3)	3	3	2

- In 2001, approximately 71% of mothers reported laying their newborns down to sleep most often on their backs.
- Mothers who received Medicaid-funded maternity care put their infants to sleep on their backs less often (65%) than mothers who did not receive Medicaid-funded maternity care (75%) in 2001.

43. "Other" includes "side and stomach," "back and stomach," and "all 3 positions."

Post Partum Depression	PRAMS 2000			PRAMS 2001		
Survey Question 60. In the months after your delivery, would you say that you were...	Total Percent (95% CI)	Medicaid Percent (95% CI)	Non-Medicaid Percent (95% CI)	Total Percent (95% CI)	Medicaid Percent (95% CI)	Non-Medicaid Percent (95% CI)
Not depressed at all	41 (38, 44)	40 (35, 45)	42 (37, 46)	41 (38, 45)	39 (34, 44)	43 (39, 48)
A little depressed	42 (38, 45)	39 (34, 44)	43 (38, 48)	38 (35, 42)	38 (33, 43)	39 (34, 43)
Moderately depressed	12 (10, 15)	12 (9, 16)	12 (10, 16)	13 (11, 16)	13 (10, 18)	13 (10, 17)
Very depressed	4 (3, 5)	6 (4, 9)	2 (1, 3)	3 (2, 4)	5 (3, 8)	2 (1, 4)
Very depressed and had to get help	2 (1, 2)	2 (1, 5)	1 (0, 2)	4 (2, 5)	5 (3, 8)	3 (1, 5)

■ In 2001, approximately 20% of women reported being moderately or very depressed in the months following delivery.

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